

MINUTES
**TRANSPORTATION ASSET MANAGEMENT COUNCIL
BRIDGE COMMITTEE MEETING**

February 22, 2018 at 1:00 p.m. – 5:00 p.m.
Aeronautics Building, 2nd Floor, Commission Conference Room
2700 Port Lansing Road
Lansing, Michigan

**** Frequently Used Acronyms List attached.**

Committee Members:

Keith Cooper, MDOT - Vice-Chair
Al Halbeisen, OHM Advisors
Bill McEntee, CRA
Brian Vilmont, Prein & Newhof

Rebecca Curtis, MDOT – Chair
Joanna Johnson, RCKC/CRA
Gary Mekjian, MML

Support Staff:

Roger Belknap, MDOT, via Telephone
Mark Holmes, DTMB/CSS
Polly Kent, MDOT
Josh Ross, DTMB/CSS

Chris Gilbertson, MTU
Dave Jennett, MDOT
Luke Peterson, MTU
Gloria Strong, MDOT

Members Absent:

Don Disselkoen, MAC
Wayne Harrall, KCRC

Brad Wieferich, MDOT

Others Present:

Mike Cousins, OHM Advisors
Cory Johnson, MDOT
Ralph Pauly, FHWA

Brad Fish, MDOT
Lisa Martin, MDOT
Taylor Snow, MDOT

1. Welcome - Call-To-Order - Introductions:

The meeting was called-to-order at 1:03 p.m.; everyone present was introduced.

2. Public Comments on Non-Agenda Items:

J. Johnson made a motion to modify the agenda by moving the TAMC Bridge Committee 2018 Meeting Schedule to 4.1 and discussing the Draft Bridge Annual Report Data for 4.2; K. Cooper seconded the motion. The motion was approved by all members present.

3. Consent Agenda (Action Item):

Approval of the January 25, 2018 Meeting Minutes (Attachment 1)

J. Johnson made a motion to approve the January 25, 2018, Bridge Committee Meeting Minutes; K. Cooper seconded the motion. The motion was approved by all members present.

4. Update Items:

4.1. – TAMC Bridge Committee 2018 Meeting Schedule

The committee was reminded that two addition meetings were added to the 2018 Bridge Committee schedule to assure there is enough time to cover the Culvert assignment. Today's meeting was added as well as a March 22, 2018, meeting. Both meetings will be held at the MDOT Aeronautics Building from 1:00 p.m. – 5:00 p.m.

4.2. – TAMC Bridge Committee Annual Report Data Update – R. Curtis

R. Curtis has completed the initial draft bridge data analysis for the 2017 Annual Report. The conditions have been stagnating and improvements have slowed. There is a slight decline in bridge condition between 2016 and 2017. The cycle of life chart will be updated. On the new chart it will show 11.3 percent declining and 6.3 percent improved. The national data is still not available for 2017. Bridge Committee members will need to review the draft and leave any comments by March 8, 2018. The draft has been added to the TAMC Sharepoint site.

4.3. - FY 2018 \$2M TAMC Supplemental Budget for Local Culvert Inspection

TAMC has been allocated \$2,000,000 to for a pilot project to inspect small culverts (under 20 feet). Inventory number, cost, and conditions are the three main issues. The goal is to have a scalable sample inventory of culverts, their conditions, and the \$2,000,000 expended or encumbered by the end of the fiscal year. MTU developed a model/plan on how to get this task covered and the monies obligated by the end of September 2018 deadline. Some agencies do not inspect culverts that are less than 20 feet, as they are not required to be reported on, or because of limited resources. Some locals do not have a set schedule unless they discover that some need to be looked at more often. Some look at them every 5 years. Many use interns or non-engineers to go out and inspect/take photos and if they find something they are concerned about then an engineer would go out and see if it is a critical element that needs to be taken care of. TAMC will need to look at best practices that agencies can use to keep everyone collecting information consistently. TAMC will need to find out what rating system agencies are using. The Infrastructure pilots are looking at this also and must provide a recommendation to the governor by April 3, 2018. There is the potential to put Culverts in MiBridge. TAMC must try to keep it manageable and possibly look at the same counties that the department went to and do the inventory and provide inspections. MDOT has done a climate vulnerability analysis and those results may help with this project since flooding (especially if the culvert is undersized) is a big issue for culvert corrosion.

Mark Holmes, Michigan Department of Management and Budget/Center for Shared Solutions, gave a presentation on the Michigan Geographic Framework (MGF) system for shared Geographic Information System data and how it ties into the many programs, including the information from the 21st Century Infrastructure Pilot Program. Water, sewer, and storm water information can also be entered. It also has the ability to collect the culvert information. They have set up a MGF Culvert schema based upon

considerations submitted by the 21st Century Infrastructure Pilot Program. The Michigan Department of Environmental Quality and the Michigan Department of Natural Resources have different attributes for their own needs. This can be modified as needed. CSS will add aggregating data. They are also able to capture the different collection systems with their MGF Data Integration Tools so that the information can be submitted in a uniform manner. MGF is a good system to integrate data. Within this system, if information comes in that does not meet the requirements as previously set forth, it is flagged and the agency that entered in the data is then contacted. Line based culverts and point based culverts will need to be considered and possibly added on a statewide level to the MGF.

4.3.1. – 2017 MDOT Culvert Collection Pilot Project (Attachment 2)

TAMC asked MDOT to give a presentation on what they have already covered, how they collected the culvert data, and where it is stored. MDOT has a GIS based system that locals may be able to tie into to keep track of their information; others use Roadsoft. Brad Fish and Taylor Snow, MDOT Survey Project Managers, gave a presentation on the Transportation Asset Management System (TAMS). They have developed a culvert collection guide. In 2017, 2875 culverts were inspected. In 2018, they plan to collect culvert information in 30 counties with a budget of \$2.7 million. They plan to do their inspections every five years. They will average 300-400 culvert inspections per county. They used a 1-9 scale like the bridge rating scale: 1-3 are critical, 3-5 are poor, 6-7 are fair, and 8-9 are good. They chose not to collect elevation data, which they felt would be too costly and people would not benefit from the information. They use the spatial quality index. Data collection requirements include barrel and end section attributes; shape, material, perch, section grates, extensions, scour, sedimentation, what did the roadway embankment look like, etc. They did not collect driveway culverts. They wanted to collect all barrel culverts. Consultants had access to all of the culvert shape files to help with location. But this year they do not have the resources to do that. They did an evaluation of all the efforts related to the collection of the culverts such as accuracy and information that should or should not have been collected. They feel it does provide a well-rounded view of Michigan culverts. They will not be collecting the conditions of culverts for 2018. There is a \$500 charge for licensing per user in ARC GIS per year. Roadsoft is a single point only with an attribute of a length. For bridges/culverts longer than 10 feet, MDOT will inspect every 2 years. MDOT is going to do a process improvement workshop that will teach field staff how to enter in new culverts so that the data stays up-to-date.

4.3.2. - MTU-CTT Draft Work Plan (Attachment 3)

Chris Gilbertson, MTU-CTT, gave a presentation on the draft work plan handout entitled, “Michigan Local Agency Culvert Inventory and Appraisal Pilot Work Plan Draft, February 22, 2018.” MTU proposes to do a Webinar to teach how to collect and enter culvert information then also do on-site training. They would like to do a survey to find out where there is already culvert data. MTU already has some

culvert information in Roadsoft; 57,000 local agency culverts were located and 71 counties had reported that information, 13 cities/villages also reported on culverts. It will be critical to determine the Pilot Scope/Scale of Effort and which agencies will participate in the pilot. MTU will need to do training on inventory and condition assessment. They had previously discussed doing a tiered system. Tier 1 – Agencies with no culvert data collected; Tier 2 – Have a few culverts located and inspected; and, Tier 3 – Agencies that have all culverts located and inspected. It needs to be determined what data needs to be stored centrally. After the pilot, MTU will do an evaluation of the pilot and come up with a statewide collection cost estimate. Then at the end MTU will do a final report on the whole process from beginning to end.

4.3.3. – Compiled Questions (Attachment 4)

MTU was provided with a list of questions from the TAMC Bridge Committee and Council members which they placed in a work plan. They will review the MDOT culvert data collection process and possibly modify to fit TAMC needs. The work plan was reviewed during the meeting and it was decided to do a survey to find out what exact culvert information is already available, who is currently collecting culvert data, how are they collecting the data (with what tool), how often are they collecting, the cost of collecting their data, what size culverts are they collecting data on, where do they store their data, and in what areas. Support staff, R. Curtis, J. Johnson, A. Halbeisen, and G. Mekjian will work with LTAP on creating the survey and send it out through eGov Delivery using Survey Monkey the week of March 5, 2018, and request that the survey be completed and submitted to LTAP by March 9, 2018. LTAP will place the survey results in the March 22, 2018, Bridge Committee meeting packet along with the map from the MDOT pilot. J. Johnson will write up a lead-in to the survey and provide to LTAP.

TAMC will look at MDOTs data that they have been collecting and their data storage methods. It was suggested to use end conditions and the condition assessment guide from 1996, which is MDOTs guide but it will need to be slightly modified. Agencies may be able to get set up in ARC GIS. The attributes in Roadsoft that TAMC may need to use and are saved at the state level are location, condition, surface type (if available), material, length, size, shape, condition assessment, and skew; possibly depth of cover, if decided at the March 22, 2018, Bridge Committee meeting. Most of the agency information received from MTU's literature research were doing 10-20 feet. TAMC will be inspecting and documenting culverts that are under 20 feet. It is not distinguished in the culvert pilot appropriations whether or not to do just non-federal aid or federal aid roads. We will not be doing any driveways or publicly owned culverts. The equipment that was suggested to be used is the laptop data system that everyone is already using. For this pilot study MTU suggests starting simple and the data collection will grow with need over time. Safety, location, condition and statewide needs are

the data lines of what TAMC would like agencies to cover. The locals will figure out what they want to do and how much they want to spend. As long as the funds are under contract it qualifies. Since one of the roles of the regions is billing and invoicing, it was suggested to continue to do this for this culvert project. Small villages and cities may ask the regions to assist since they may not have the skill set to handle the project. TAMC will need to give the agencies options on what tool to use to collect the data. Some may need to purchase a tool or they may use a spreadsheet and someone place the information into the system. Some may use the simple hand-held GIS. TAMC may be able to reimburse agencies for equipment up to a certain amount. We will need to provide training to use the equipment. A Webinar will be the simplest way to do the training. It may be possible for the regions to purchase the equipment and provide the training. Some agencies may have to take it to their board or region to get permission to participate in the pilot. TAMC will need to select the areas that they wish to participate in this pilot by March 26, 2018. Since the majority of agencies already use Roadsoft, that may be the best way to go. TAMC will need to look at the Road Condition Sewer and Water Asset Management (SAW) grants. TAMC may consider agencies that participated in the SAW program, as well as agencies collecting roadway conditions. We also need to minimize the number of regions whose contracts may need to be amended to add this pilot. To amend the regional program is the only thing that needs to go to full Council for the contracts and how much it will cost. R. Curtis will inform the full Council at the March 7, 2018, TAMC meeting. MTU will do an estimate of cost for the pilot. MDOT TAMS has a good estimate that they can work from as an example. TAMC support staff will work on a budget that includes any additional costs from MTU and CSS and bring it to full Council for approval.

Action Item: A work group of the Bridge Committee will create a survey instrument to determine levels of culvert inventories across local agencies; the survey instrument will be shared with TAMC support staff for distribution through E-Gov delivery the week of March 5, 2018.

4.4 – Bridge Asset Management Workshop Update – MTU-CTT

Due to lack of time, this item was tabled until the next meeting.

5. Correspondence and Announcements

5.1. – Included in the packet for information (Attachments 5, 6, 7):

5.1.1. – Special Tops in Roadsoft: Culvert Module Webinar, February 26, 2018

5.1.2. – 2018 Michigan Bridge Conference, Ann Arbor, March 20, 2018

5.1.3. – TAMC 2018 Spring Conference, Traverse City, May 22, 2018

6. Public Comments:

None

7. Public Comments:

None

8. Adjournment:

The meeting adjourned at 5:05 p.m. The next meeting will be held March 22, 2018, at 1:00 p.m.-5:00 p.m., MDOT Aeronautics Building, 2nd Floor Commission Conference Room, Lansing.

| FREQUENTLY USED ACRONYMS: | |
|---------------------------|--|
| AASHTO | AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS |
| ACE | ADMINISTRATION, COMMUNICATION, AND EDUCATION (TAMC COMMITTEE) |
| ACT-51 | PUBLIC ACT 51 OF 1951-DEFINITION: A CLASSIFICATION SYTEM DESIGNED TO DISTRIBUTE MICHIGAN'S ACT 51 FUNDS. A ROADWAY MUST BE CLASSIFIED ON THE ACT 51 LIST TO RECEIVE STATE MONEY. |
| ADARS | ACT 51 DISTRIBUTION AND REPORTING SYSTEM |
| BTP | BUREAU OF TRANSPORTATION PLANNING (MDOT) |
| CRA | COUNTY ROAD ASSOCIATION (OF MICHIGAN) |
| CSD | CONTRACT SERVICES DIVISION (MDOT) |
| CSS | CENTER FOR SHARED SOLUTIONS |
| DI | DISTRESS INDEX |
| FAST | FIXING AMERICA'S SURFACE TRANSPORTATION ACT |
| FHWA | FEDERAL HIGHWAY ADMINISTRATION |
| FOD | FINANCIAL OPERATIONS DIVISION (MDOT) |
| FY | FISCAL YEAR |
| GLS REGION V | GENESEE-LAPEER-SHIAWASSEE REGION V PLANNING AND DEVELOPMENT COMMISSION |
| GVMC | GRAND VALLEY METRO COUNCIL |
| HPMS | HIGHWAY PERFORMANCE MONITORING SYSTEM |
| IBR | INVENTORY BASED RATING |
| IRI | INTERNATIONAL ROUGHNESS INDEX |
| IRT | INVESTMENT REPORTING TOOL |
| KATS | KALAMAZOO AREA TRANSPORTATION STUDY |
| KCRC | KENT COUNTY ROAD COMMISSION |
| LDC | LAPTOP DATA COLLECTORS |
| LTAP | LOCAL TECHNICAL ASSISTANCE PROGRAM |
| MAC | MICHIGAN ASSOCIATION OF COUNTIES |
| MAP-21 | MOVING AHEAD FOR PROGRESS IN THE 21 ST CENTURY (ACT) |
| MAR | MICHIGAN ASSOCIATION OF REGIONS |
| MDOT | MICHIGAN DEPARTMENT OF TRANSPORTATION |
| MDTMB | MICHIGAN DEPARTMENT OF TECHNOLOGY, MANAGEMENT AND BUDGET |
| MITA | MICHIGAN INFRASTRUCTURE AND TRANSPORTATION ASSOCIATION |
| MML | MICHIGAN MUNICIPAL LEAGUE |
| MPO | METROPOLITAN PLANNING ORGANIZATION |
| MTA | MICHIGAN TOWNSHIPS ASSOCIATION |
| MTF | MICHIGAN TRANSPORTATION FUNDS |
| MTPA | MICHIGAN TRANSPORTATION PLANNING ASSOCIATION |
| MTU | MICHIGAN TECHNOLOGICAL UNIVERSITY |

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|---------------|--|
| NBI | NATIONAL BRIDGE INVENTORY |
| NBIS | NATIONAL BRIDGE INSPECTION STANDARDS |
| NFA | NON-FEDERAL AID |
| NFC | NATIONAL FUNCTIONAL CLASSIFICATION |
| NHS | NATIONAL HIGHWAY SYSTEM |
| PASER | PAVEMENT SURFACE EVALUATION AND RATING |
| PNFA | PAVED NON-FEDERAL AID |
| PWA | PUBLIC WORKS ASSOCIATION |
| QA/QC | QUALITY ASSURANCE/QUALITY CONTROL |
| RCKC | ROAD COMMISSION OF KALAMAZOO COUNTY |
| ROW | RIGHT-OF-WAY |
| RPA | REGIONAL PLANNING AGENCY |
| RPO | REGIONAL PLANNING ORGANIZATION |
| SEMCOG | SOUTHEAST MICHIGAN COUNCIL OF GOVERNMENTS |
| STC | STATE TRANSPORTATION COMMISSION |
| STP | STATE TRANSPORTATION PROGRAM |
| TAMC | TRANSPORTATION ASSET MANAGEMENT COUNCIL |
| TAMCSD | TRANSPORTATION ASSET MANAGEMENT COUNCIL SUPPORT DIVISION |
| TAMP | TRANSPORTATION ASSET MANAGEMENT PLAN |
| TPM | TRANSPORTATION PERFORMANCE MEASURES |
| UWP | UNIFIED WORK PROGRAM |

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